Reviewer’s report

Title: The characteristics of mixing patterns of sexual dyads and factors correlated with condomless anal intercourse among men who have sex with men in Guangzhou, China

Version: 0 Date: 15 Dec 2018

Reviewer: Gifty Marley

Reviewer's report:

First off, I wish to acknowledge that the topic of this paper was quite interesting and it aimed to tackle an aspect of health interventions which would have shed greater lights into the determining factors of sexual behaviors among MSM. The insight from such a study would have huge implications for behavior change intervention in the field of HIV studies. I am however not sure the discussion of the paper did justice to the topic and could do well with some minor and major revisions.

Title: Kindly consider revising the title since the manuscript does not necessarily measure the association between social network characteristics (social communication for that matter) to condom use behaviors as initially stipulated.

First off, the introduction section need some minor revisions. It does not say much about social network characteristics and how they determine behavior among groups such as the MSM community. This makes it hard to understand and justify why we need to research their impact and association to sexual health behaviors.

First paragraph Line 45 - 50, please include the year of the sentinel survey to give better perspective to readers.

Second paragraph Line 3 - 12, provide reference to the attribution made here. Also, condom use interventions have led to some improvement which are not unnoticeable. I believe there are many studies out there that have highlighted the impact of behavior change interventions among MSM in China. Also, there are other factors responsible for the slow rate large scale of change in behavior that you need to recognize such as early decay rate of newly learnt behaviors which is dependent on the mood of learning among others.

Paragraph 4 line 1 "The social network concept first appeared in HIV-related research in 1985"...the mention of social network concept was abrupt here and not related to the current issue being outlined in the paragraph. This concept needs to be properly articulated in the introduction to provide justification for the study.

Paragraph 4 line 12 - 26...this is a long run-on sentence. Please breakdown into 3 or 2 sentences to enhance easy comprehension of your point.

Methods section
Paragraph 1 line 53... replace "lived" with "live"

Also, the term "sex partner" repeated throughout this document should be replaced with "sexual partner"

Discussion section

Paragraph 2 line 14 - 20 "Young MSM have been reported to have a higher risk of CAI with sexual partners during anal intercourse 8 20. Although previous studies corroborated this conclusion, our study found deeper influencing factors." consider revising into one sentence such as "Previous studies have corroborated the conclusion that young MSM have a higher risk of CAI with sexual partners during anal intercourse, however, our study have identified other influencing factors"

Paragraph 2 line 20 - 31 "Frequently, MSM who were 30 years or younger chose partners in the same age category, which did not lead to increased CAI practise; however, MSM who chose younger or older (41 years or older) partners were more likely to engage in CAI" ... what could account for these observations? kindly elaborate a bit on each of your findings and their implications as well as your recommendations based in each Paragraph 4 line 45 - 47 "Few relevant results have been reported in previous studies as other scholarships focused more on individual behaviours than relational dyads" ... i am not sure if the word "scholarship" was meant to be here.

Paragraph 5 line 28 -31 "The HIV epidemic should be exposed to the public by local governments or relevant organizations" ... if this is in reference to Government making access to data on the National HIV epidemic level easily accessible to all, then kindly rephrase to say such.

The limitations and conclusion have clearly showed that the paper was not able to measure and discuss the the characteristics of the construction of MSM social networks which from the title seems to be the main focus of the paper. This findings however do contribute to existing data on determining factors of sexual risk behaviors among MSM by providing some new insight.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
Unable to assess

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review? If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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